

## Patent Abstracts of Japan

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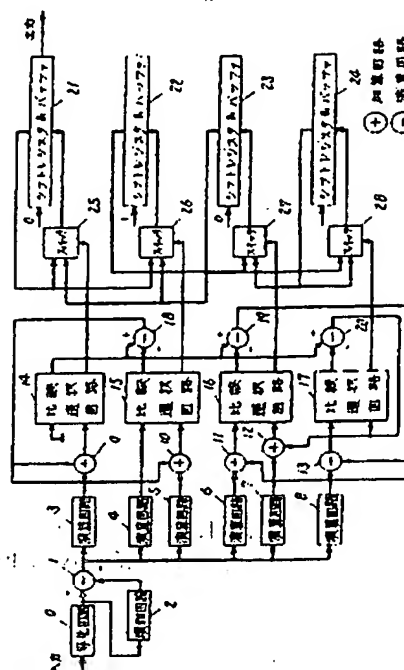
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TITLE : DIGITAL SIGNAL REPRODUCING  
DEVICE



ABSTRACT : PURPOSE: To improve recording density and to reduce a decoding error rate by providing a specific product sum means, a subtraction means and a decoding means decoding a digital signal based on the output of the subtraction means.

CONSTITUTION: The title device is provided with a product sum means 2 which calculates products  $m_i = C_i \cdot y_{k-1}$  ( $i=1 \dots Q$ ) between  $Q$  sets of consecutive reception signal series  $y_{k-1}$  ( $i=1 \dots Q$ ) from a time  $(k-Q)T$  till a time  $(k-1)T$  and prediction coefficients  $C_i$  ( $i=1 \dots Q$ ) with respect to  $Q$  set of consecutive noise and calculating the sum ( $s$ ) of the  $Q$  sets of products ( $T$  is a sample time interval of the reception signal), a subtraction means 1 subtracting the output of the product sum means 2 from the reception signal  $y_k$  at a time  $kT$  and a signal means decoding the digital signal based on the output of the subtraction means 1. Thus, the noise prediction coefficient is multiplied with the past equalizing signal and the result is added to eliminate noise correlation and to minimize the noise. Thus, the decoding error rate is reduced and the recording density is improved.

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